

Appl. N<sup>o</sup>. : 09/855,321  
Filed : May 14, 2001

### REMARKS

Claims 17-43 are pending in the present application and stand rejected. Independent Claims 17 and 41 have been amended herein to indicate that at least two reaction space volumes of inactive gas are moved through the reaction space in an interval between each two successive vapor phase reaction pulses such that reactant molecules adsorbed on the walls of the reaction space are removed. Support for this amendment can be found, for example, at page 13, lines 7-10 of the specification. Claims 18-22 and 43 have been amended in view of the changes to the independent claims. New Claims 44 and 45 have been added to recite removal of particular levels of reactant molecules. Support for these claims can be found, for example, in original Claims 20 and 21. Claim 22 has been cancelled. No new matter is added by the present amendments.

#### Claim Rejections under 35 U.S.C. § 103(a)

The Examiner has maintained the rejection of Claims 17-43 as obvious over Nishizawa (U.S. Patent No. 4,975,252) in view of one or more additional references. In particular, the Examiner found that Nishizawa teaches a high pressure evacuation of the chamber in an ALD process and that the total volume of the reaction space would be essentially totally evacuated. Sakuma (U.S. Patent No. 5,270,247) is cited for the proposition that reactant pulses should be as separated as much as possible and Moore (U.S. Patent No. 3,662,583 is cited for teaching oblong feed pipes.

Applicants continue to believe that Nishizawa fails to teach evacuating a volume of gas equal to two or more gas volumes of the reaction space as recited in Claims 17 and 41. Further, there is no teaching or suggestion in Nishizawa to utilize a purge gas. This lack of teaching is not made up for any of the secondary references.

Nevertheless, to facilitate prosecution, Applicants have amended independent Claims 17 and 41 to recite moving at least two reaction space volumes of inactive gas through the reaction space in an interval between each two successive vapor phase reactant pulses such that reactant molecules adsorbed on the walls of the reaction space are removed. As discussed in the interview with the Examiner, neither Nishizawa nor the secondary references teach or suggest utilizing an inactive gas to remove reactants from the walls of the reaction space. Thus, Applicants submit that rejection of Claims 17-43 should be withdrawn.

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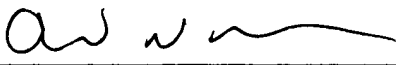
**Conclusion**

For the reasons presented above, Applicants submit that the present application is in condition for allowance and respectfully request the same. If any issues remain, the Examiner is cordially invited to contact Applicants' representative at the number provided below in order to resolve such issues promptly.

Respectfully submitted,

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